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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/077,310	02/15/2002	Kyool Seop Lee	13921-002001	3387
26161	7590	09/08/2004	EXAMINER	
FISH & RICHARDSON PC 225 FRANKLIN ST BOSTON, MA 02110			JUSKA, CHERYL ANN	
			ART UNIT	PAPER NUMBER
			1771	
DATE MAILED: 09/08/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/077,310

Applicant(s)

LEE ET AL.

Examiner

Cheryl Juska

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 May 2004.
2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-7,9,10 and 12-15 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-3,5-7,9,10 and 12-15 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

- 4) ☐ Interview Summary
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Examination
6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. Applicant's amendment filed May 27, 2004, has been entered. The specification has been amended as requested. Claims 1 and 9 have been amended. Claims 4, 8, and 11 have been cancelled, while new claims 12-15 have been added. Thus, the pending claims are 1-3, 5-7, 9, 10, and 12-15.
2. Said amendment is sufficient to withdraw the 112, 2nd rejections set forth in sections 1 (second occurrence), 4, and 6-8 of the last Office Action. Additionally, the prior art rejections set forth in sections 10 and 11 of the last Office Action. Specifically, the limitation that the yarn liner density ranges from 200-240 g/m is now given patentable weight since applicant attests that this recitation is correct (Amendment, paragraph spanning pages 8-9). The cited prior art does not teach or suggest to one skilled in the art to increase the yarn denier from a conventional range of 700-5000 to the claimed range of 1,800,000-2,160,000 denier. [See discussion of this claim limitation below.] Thus, the prior art rejections set forth in sections 10 and 11 are hereby withdrawn.

Specification

3. The abstract of the disclosure is objected to because of the recitation of "beck coated" in line 1 of the paragraph at page 11, line 11. It is believed applicant intends "back coated." Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1, 2, 14, and 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. Claim 1 stands rejected for the recitation of “yarns with a density of 200 to 240 g/m” as noted in the last Office Action. It is unclear how a carpet yarn can be of this size. New claim 14 is similarly rejected.

7. Claim 1 stands rejected for the use of the tradename “Superba.” Applicant traverses this rejection by amending the claim to state “Superba heat-setting device” and arguing that Superba refers to the apparatus rather than a source of goods. The examiner respectfully disagrees. Yes, “Superba” does refer to an apparatus for heat setting, but it is of a proprietary nature. Claim 14 is similarly rejected.

8. Claim 2 stands rejected as set forth in section 5 of the last Office Action. It is still unclear if the dope dyed PTT yarns are the yarns that are later dyed by the beck. Claims 13 and 15 are similarly rejected.

9. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

- Claims 1-3, 5-7, 9, 10, 14, and 15 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claims contains subject matter which

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was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Said claims limit the carpet yarn to having a linear density of 200-240 g/m. A linear density as claimed is equivalent to a yarn size of 1.8 – 2.16 *million* denier. This translates to 100 yards of yarn weighing just under 50 lbs! Typical carpet yarn sizes range from about 500 to 8000 denier. [Note the cited art of Howell teaches PTT yarns having a denier from 700-5000 (col. 1, lines 55-61).] While US 5,958,548 issued to Negola et al. teaches of a carpet yarn having a total yarn denier of 10,500 denier (col. 14, line 21 and col. 18, line 64), the examiner is not aware of any carpet yarns having a denier in the million range. Since the claimed linear density of the yarn is so far outside of the scope of convention, one of ordinary skill in the art would not understand how to make and use said yarn. Yet, applicant has not provided an enabling specification as to how to make and use (i.e., tuft a carpet) a yarn having a denier of 1.8-2.16 million denier. Therefore, claims 1-3, 5-7, 9, 10, 14, and 15 are rejected under 112, 1st paragraph as non-enabling.

Claim Rejections - 35 USC § 101

10. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-3, 5-7, 9, 10, 14, and 15 are rejected under 35 U.S.C. 101 because the disclosed invention is inoperative and therefore lacks utility. The claimed linear density of 200-240 g/m is inoperable in the carpet art, because such a pile yarn would be impossible to tuft on standard

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machinery with conventional primary backings. Additionally, such a yarn would produce a carpet too heavy to transport. Therefore, said claims lack utility.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,242,091 issued to Howell et al. in view of US 6,315,934 issued to Chuah.

Howell discloses carpets made of PTT yarns. The carpets are made by tufting yarns of crimped, ply twisted, bulked continuous filaments (BCF) (col. 1, lines 47-50). Said yarns have a denier per filament ranging from 4-25 and a total yarn denier ranging from 700-5000 (col. 1, lines 55-61). Specifically, a number of spun PTT filaments are bulked and/or entangled by means of a jet bulking unit and/or entangling unit (col. 3, lines 25-53). The bulked yarns are then cable twisted together in an amount ranging from 3.5-6.5 twists per inch (tpi) and heat set at a temperature of 270-290 F by way of an autoclave or Superba[®] unit (col. 4, lines 27-32). The cabled and heat-set yarns are then tufted into a primary backing and a latex backcoat and secondary backing are applied (col. 4, lines 33-34). The carpets may have a cut loop pile height of 0.25-1 inch or a loop pile height of 0.125-0.375 inches (col. 4, lines 34-37). Additionally, Howell teaches a 160 hole spinneret that forms two 80 filament strands, wherein the filaments have a trilobal cross section and a modification ratio of 1.7 (col. 6, lines 37-41). Furthermore,

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Howell teaches cable twisting yarns of 4 plies with 4 tpi (col. 7, lines 42-45). Carpets made from said yarns are dyed in a Beck with disperse dyes (col. 7, lines 44-45).

Thus, Howell teaches the invention of claim 12 with the exception of (a) the speed and air pressure of the intermingle machine, (b) the number of stitches per inch in the tufted carpet, and (c) the lack of a carrier and the process conditions of the beck dyeing step.

With respect to the first exception, it is noted that Howell teaches air entangling the yarns, but fails to teach the claimed process conditions of line speed and air pressure. However, it is argued this limitation is obvious over Howell since it has been held that where the general conditions of a claim are disclosed in the prior art, the workable or optimum ranges are within routine skill in the art. *In re Aller*, 105 USPQ 233.

With respect to the number of stitches per inch, applicant is hereby given Official Notice that carpets are typically tufted with a number of stitches per inch in the range disclosed. Thus, it would have been obvious to a person having ordinary skill in the art to tuft the Howell carpet with a stitch density in the range of 5-15 stitches per inch as claimed. Such a modification would have been motivated by the convention in the art. The Examiner notes that the facts asserted to be common and well-known are capable of instant and unquestionable demonstration as being well-known. To adequately traverse such a finding, applicant must specifically point out the supposed errors in the examiner's action, which would include stating why the noticed fact is not considered to be common knowledge or well-known in the art. [Note applicant did not traverse this point in the response to the first Office Action.]

With respect to lack of carrier and the process conditions of the beck dyeing step, it is argued that this feature is well known in the art of carpeting. For example, Chuah discloses

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BCF, air entangled, twisted and heat-set PTT yarns for tufting into carpets. Additionally, Chuah teaches dyeing the tufted pile carpet with a disperse dye, without a carrier, at atmospheric boil (col. 8, lines 1-5). Thus, it would have been obvious to one skilled in the art to dye the PTT carpet of Howell with a disperse dye and no carrier at atmospheric pressure and a temperature of 90-100 C, since it is known in the art that disperse dyeing without carriers is suitable for PTT carpets, as evidenced by Chuah.

Claim 13 is rejected along with claim 12, since the limitations that the yarn is dope dyed amounts to a structural limitation in a method claim. As such, said limitation is not given patentable weight at this time. To be entitled to weight in method claims, recited structure limitations must affect the method in a manipulative sense and not amount to the mere claiming of a use of a particular structure. *Ex parte Pfeiffer*, 135 USPQ 31. The presence of dope dyed yarns does not materially affect the process claimed. Therefore, claim 13 is rejected.

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

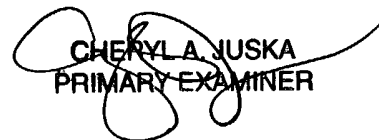
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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

14. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Cheryl Juska whose telephone number is 571-272-1477. The Examiner can normally be reached on Monday-Friday 10am-6pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Terrel Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-0994.


CHERYL A. JUSKA
PRIMARY EXAMINER